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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/787,063

02/25/2004

Darryl C. Bassani

BASSA.023A

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06/22/2006

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EXAMINER

EDWARDS, LOREN C

ART UNIT

PAPER NUMBER

3748

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/787,063	BASSANI, DARRYL C.	
	Examiner	Art Unit	
	Loren C. Edwards	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/19/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/21/06 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 2, 5-8, 10, 13-16, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tromel (U.S. 3,177,649) in view of Coff et al. (U.S. 5,944,322). Tromel discloses an exhaust header for collecting exhaust gases from an internal

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combustion engine, the exhaust header comprising: a plurality of flanges (Tromel; Fig. 1; Fig. 4, No. 18), each having a recessed sealing surface (Tromel; Fig. 4) that is configured to circumscribe an exhaust port of an internal combustion engine, wherein the recessed sealing surface is configured so as to support therein a gasket (Tromel; Fig. 4, No. 19) in a manner such that at least a portion of the gasket is exposed to gas flowing out the exhaust port; a plurality of gaskets (Tromel; Fig. 1; Fig 4, No. 19), each located in the recessed sealing surface and configured to form separate seals between each flange and the engine around the exhaust port; a plurality of head pipes (Tromel; Fig. 1, Nos. 13 and 14) in flow communication with the plurality of flanges and configured to route exhaust gases from the plurality of flanges; and a collector (Tromel; Fig. 1, No. 12) having a plurality of inlet ports connected to the plurality of head pipes. Tromel fails to specifically disclose the gaskets comprising graphite. Coff discloses a gasket for use in hi-temperature applications that contains graphite (Coff; Col. 4, Line 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the gasket of Coff in the system of Tromel for the advantage of an economical gasket which is capable of withstanding the high temperatures and thermal cyclings common to an internal engine application (Coff; Col. 4, Lines 11-22).

5. With regards to claim 2, the modified Tromel discloses the exhaust header of claim 1, as described above, and further wherein the flange comprises two bolt holes (Tromel; Fig. 4, No. 21).

6. With regards to claim 5, the modified Tromel does not disclose expressly a recess having a depth of approximately 0.1 inches. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to set the depth of the recess to 0.1 inches because Applicant has not disclosed that a depth of 0.1 inches provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a recess of another depth because it would have allowed for another sized gasket to fit in the recess.

7. With regards to claim 6, the modified Tromel discloses the exhaust header of claim 1, as described above, and further wherein the recessed sealing surface has a substantially circular shape (Tromel; Fig. 4).

8. With regards to claim 7, the modified Tromel discloses the exhaust header of claim 1, as described above, and further wherein the recessed sealing surface has a substantially rectangular shape (Tromel; Fig. 4).

9. With regards to claim 8, the modified Tromel discloses the exhaust header of Claim 7, as described above, and further wherein the graphite gasket comprises metal reinforcement (Coff; Abstract).

10. With regards to claim 10, the modified Tromel discloses an apparatus configured to attach an exhaust pipe to an engine head to form an exhaust header for collecting exhaust gases from one or more exhaust ports from a cylinder of an internal combustion engine, the apparatus comprising: a flange (Tromel; Fig. 1; Fig. 4, No. 18) having a passageway extending therethrough, the flange further comprising: a recessed seal

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surface (Tromel; Fig. 4) configured so as to support therein a gasket (Tromel; Fig 4, No. 19) in a manner such that at least a portion of the gasket is exposed to gas flowing out the exhaust port wherein the seal surface is configured to circumscribe a single exhaust port; and a graphite (Coff; Col. 4, Line 12) gasket located on the seal surface and configured to form a seal between the internal combustion engine and the flange.

11. With regards to claim 13, the modified Tromel discloses the apparatus of claim 10, as described above, and further wherein the flange comprises two bolt holes (Tromel; Fig. 4, No. 21).

12. With regards to claim 14, the modified Tromel does not disclose expressly a recess having a depth of approximately 0.1 inches. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to set the depth of the recess to 0.1 inches because Applicant has not disclosed that a depth of 0.1 inches provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a recess of another depth because it would have allowed for another sized gasket to fit in the recess.

13. With regards to claim 15, the modified Tromel discloses the apparatus of claim 10, as described above, and further wherein the seal surface has a substantially annular shape (Tromel; Fig. 4).

14. With regards to claim 16, the modified Tromel discloses the apparatus of claim 10, as described above, and further wherein the seal surface has a substantially rectangular shape (Tromel; Fig. 4)

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15. With regards to claims 19 and 22, the modified Tromel discloses the header and apparatus of claims 1 and 10 and the methods for installation are inherently included.

16. With regards to claim 20, the modified Tromel discloses the method of claim 19, as described above, and further wherein the graphite gasket protrudes beyond an outer surface of the flange (Coff; Fig. 5 t_1' and t_2').

17. With regards to claim 21, the modified Tromel discloses an apparatus configured to attach an exhaust pipe to an engine head to form an exhaust header for collecting exhaust gases from one or more exhaust ports from a cylinder of an internal combustion engine, the apparatus comprising: a flange (Tromel; Fig. 1; Fig. 4, No. 18) having a passageway extending therethrough, the flange further comprising bolt holes (Tromel; Fig. 4, No. 21) for directly connecting the flange to the internal combustion engine, and a recessed seal surface (Tromel; Fig. 4) configured so as to support therein a gasket in a manner such that at least a portion of the gasket is open to the passageway, wherein the recessed seal surface is configured to circumscribe a single exhaust port; and a graphite gasket (Coff; Abstract) configured to be positioned against the seal surface and form a seal between the internal combustion engine and the flange.

18. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tromel as applied to claim 1 above, and further in view of Itoh (U.S. 6,256,990). The modified Tromel discloses the header of claim 2, as described above, but fails to specifically discuss one of the two boltholes being open to an edge of the flange. Itoh teaches a means for attaching a header or manifold to an engine, which uses an open bolt hole (Itoh; Fig. 1, Nos. 11b and 14b). It would have been obvious to one having ordinary skill

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in the art at the time the invention was made to utilize the open bolt hole of Itoh in the header of Tromel for ease of placement and assembly in that open bolt design only requires loosening of the bolts instead of removal for servicing.

19. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tromel as applied to claim 1 above, and further in view of Kaifel et al. (U.S. 6,254,142). The modified Tromel discloses the exhaust header of claim 1, as described above, but fails to specifically discuss the flange comprising a chamfered inside surface so as to provide a transition between an inner surface of the flange and an inside diameter of the head pipe. Kaifel discloses an exhaust manifold flange for an internal combustion engine that comprises a flange on the inside diameter of the flange where the exhaust port of the engine will transition into the inside diameter of the exhaust pipe (Kaifel; Figs. 7-8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the chamfer as taught by Kaifel in the header of Tromel for the advantage of promoting a smooth laminar flow.

20. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tromel as applied to claim 1 above, and further in view of Mercuri (U.S. 6,087,034). The modified Tromel discloses the exhaust header of claim 1, as described above, but fails to specifically discuss wherein the graphite gasket has a melting temperature of at least 2000 degrees Fahrenheit. Mercuri discloses flexible graphite composite used in making gaskets that has a melting temperature of at least 2000 degrees Fahrenheit (Mercuri; Claims 1 and 10). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the material of Mercuri in the header of

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Tromel for the advantage high temperature use (Mercuri; Col. 1, Line 65 – Col. 2, Line 17).

21. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tromel as applied to claim 10 above, and further in view of Adams (U.S. 4,968,066). The modified Tromel discloses the apparatus of claim 10, as described above, but fails to specifically discuss wherein the flange is made of metal or, in particular, iron. Adams teaches a flange which is made of iron (Adams; Col. 3, Lines 56-59). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the material of Adams in the apparatus of Tromel for the advantage of reduced cost.

22. Claim 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tromel as applied to claim 10 above, and further in view of Brooks (U.S. 3,875,744). The modified Tromel discloses an apparatus configured to attach an exhaust pipe to an engine head to form an exhaust header but lacks a cross-sectional area which varies, or which increases. Brooks teaches an exhaust system which has a cross sectional area that both varies and increases as it moves away from the engine (Brooks; Figs. 1-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a flange that had across sectional area that varied and increased in order to reduce back pressure of an exhaust system.

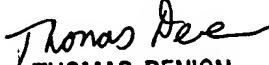
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loren C. Edwards whose telephone number is (571) 272-2756. The examiner can normally be reached on M-TH 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Loren Edwards


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